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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,095	04/12/2004	Hiroyuki Shinoda	Q81029	2192
23373 7590 07/30/2010 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER HALIYUR, VENKATESH N				
ART UNIT 2476		PAPER NUMBER		
NOTIFICATION DATE 07/30/2010		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/822,095

**Applicant(s)**

SHINODA ET AL.

**Examiner**

VENKATESH HALIYUR

**Art Unit**

2476

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 May 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-53 (claims 8, 17, 19-46 are canceled) is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-16, 18 and 47-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07/23/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. The amendment filed on 05/19/2010 has been fully considered and therefore the rejection communicated via previous office action has been withdrawn. However a new ground(s) of rejection has been made in view of a newly found reference. Please also refer to the interview summary of 07/20/2010. Rejection follows.
2. Claims 1-53 are pending in the application. Claims 8, 17, 19-46 are canceled. Claims 52-53 is new.

***Claim Objections***

3. Claim 5 is objected to because of the following informalities: Please correct the grammatical errors in phrase(s) in line 2, which recites as "communication elements has allows local communication..." Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1,2,5,9,11,14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 9, there is lack of antecedent basis for communication elements and signal in the limitation as recited in the limitation, "communication elements which is subsequently to receive signal, wherein the recipient communication element determines whether a signal is destined to the element by referring to the ID included in the signal".

In claims 2, 11, 5, 14, the communication between the communication elements and the target device must be positively recited to clarify the meaning of local communication between the communication elements.

Therefore claims 1,2,5,9,11,14 are indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Appropriate correction is required in these claims and dependent claims where required.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-7, 9-16, 18, 47-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barber [US Pat: 7,262,702] in view of Reeb [US Pat: 4,792,790].

Regarding claims 1,10, Barber disclosed a communication apparatus elements comprising: a first conductive layer and a second conductive layer **(454a and 454b of Fig 14, conductive layers, Figs 14-16)** and a plurality of communication elements **(sensors, item 894 of Fig 22)** that are connected to the first conductive layer and the second conductive layer **(col 16, lines 54-67, col 17, lines 1-13, col 22, lines 41-50)**, wherein a first communication element of the plurality of communication elements, initiating transmission to a second communication element of the plurality of communication elements, is operative to control a voltage between the first conductive layer and the second conductive layer **(col 22, lines 41-60)** letting the second communication element to acknowledge a change in the voltage propagated around the first communication element as a signal **(communication circuit, item 880 of Fig 22)**, wherein the second communication element is operative to monitor the signal from the first communication element and acknowledge the change in the voltage between the first conductive layer and the second conductive layer as the signal **(col 9, lines 1-33, col 17, lines 35-42, col 21, lines 44-65, Figs 20-21)**, Barber disclosed communication element is assigned an ID identifying the elements **(col 8, lines 26-41, Fig 8)** and the feature wherein the plurality of communication elements can be placed for communication without individual conductive wires **(col 8, lines 42-53, col 20, lines 56-67)**, but fails to disclose wherein the second

communication element is assigned an ID identifying the elements and the signal includes an ID identifying a recipient communication element of the plurality of communication elements which is subsequently to receive the signal, and wherein the recipient communication element determines whether a signal is destined to the element by referring to the ID included in the signal. However, Reeb disclosed a device that transmits signals which includes unique identification of a particular layer sending the signal (**Fig 30, col 19, lines 5-41**). Therefore it would have been possible for one of ordinary skill in the art at the time the invention was made to use the method of transmitting source and the final destination identification in the signal as taught by Reeb in the system of Barber to include assigning second communication element an ID, identifying the elements and a recipient ID, identifying a recipient communication element of the plurality of communication elements in the signal. One is motivated as such in order to include the source and final destination identification (ID) in the signal transmitted by the sensor device (RFID) for the recipient communication element to determine whether a signal is destined to the element by referring to the ID included in the signal in order to communicate between the elements wirelessly.

Regarding claims 2, 11, Barber disclosed where in the first communication element is operative to generate, as the signal, the change in the voltage between the first conductive layer and the second conductive layer propagated concentrically around the first communication elements (**col 8, lines 42-67, col 9, lines 1-47**).

Regarding claims 3-4, 12-13, Barber et al Barber disclosed communication element is assigned an ID identifying the elements (**col 8, lines 26-41, Fig 8**) but fails to disclose wherein the transmitted signal includes an ID identifying a communication element which is a final destination of the signal and wherein the transmitted signal includes an ID identifying a communication element which is an originating source of transmission of the signal. However, Reeb disclosed a device that transmits signals which includes unique identification of a particular layer sending the signal (**Fig 30, col 19, lines 5-41**). Therefore it would have been possible for one of ordinary skill in the art at the time the invention was made to use the method of transmitting source and the final destination identification in the signal as taught by Reeb in the system of Barber to include assigning second communication element an ID, identifying the elements and a recipient ID, identifying a recipient communication element of the plurality of communication elements in the signal. One is motivated as such in order to include the source and final destination identification (ID) in the signal transmitted by the sensor device for the recipient communication element to determine whether a signal is destined to the element by referring to the ID included in the signal.

Regarding claims 5, 14, Barber disclosed, wherein each of the communication elements allows local communication with other neighboring communication elements (**col 2, lines 51-63**), the local communication allowing sequential transmissions of a signal between the communication elements to

convey the signal to a target communication element, said target communication element being disposed between the first and the second conductive layers (**col 15, lines 13-24**).

Regarding claims 6-7, 15-16, Barber disclosed wherein the first conductive layer and the second conductive layer are flat layers and wherein the first conductive layer and the second conductive layer are uniform conductive layers (**col 17, lines 1-13, Figs 14-16**).

Regarding claim 9, 18, Barber disclosed comprising a sensor element including a circuit for measuring stress or temperature (**col 18, lines 56-67, col 19, lines 1-2**).

Regarding claim 47, 49 Barber et al disclosed wherein the plural communication elements are laterally spaced from each other so as to not overlap each other in a direction of disposition of the first and second conductive layers (**col 21, lines 44-59**).

Regarding claims 48, 50 Barber et al disclosed wherein the plurality of communication elements is physically disposed between the first and second conductive layers (**col 17, lines 1-13**).

Regarding claim 51, Barber et al disclosed wherein the plural communication elements are laterally spaced from each other so as to not overlap each other in a direction of disposition of the first and second conductive layers (**col 20, lines 1-14**).



Regarding claims 52-53, Barber disclosed wherein the plurality of communication elements each comprises a communicating unit, a processing unit and a memory (**item 390 of Fig 11, col 15, lines 7-14**).

### ***Response to Arguments***

8. Applicant's arguments, remarks filed on 05/19/2010, with respect to the rejection(s) of claim(s) 1-51 under 35 U.S.C 103(a) have been fully considered and persuasive and therefore the rejection of claims made in the previous office action has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found reference.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., order of communication elements and conductive layers for a sensor network see, pp 50-60, 86-93 of the Specification Figs 17-38 are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims and therefore a broad reasonable interpretation of the claim limitations have been given in the rejections. Please also refer to the interview summary of 07/20/2010 for further details and based on the interview discussions, the examiner requests applicants to further define the claim limitations in claims 1, 9, 2, 11, 5, 14 (see figures 3, 11) to positively recite the claim limitations of communication between the communication elements and the target

device placed between the conductive layers for the sensor networks for which the applicant's rely on in their invention..

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications should be directed to the attention to Venkatesh Haliyur whose phone number is 571-272-8616. The examiner can normally be reached on Monday-Friday from 9:00AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached @ (571)-272-7884. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (571)-272-2600 or fax to 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

/Venkatesh Haliyur/

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Examiner, Art Unit 2476

/Ayaz R. Sheikh/

Supervisory Patent Examiner, Art Unit 2476